	Туре	L#	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	160	bend\$6 near10 ((fresnel or	TDO DERWENT	2002/09/14 01:23
2	BRS	L8	51	359/\$.ccls. and 1	JPO; DERWENT; IBM TDB	2002/09/14 01:38
3	BRS	L15	109	1 not 8	 USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/09/14 01:37
4	BRS	L22	207	fresnel near10 equivalent	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/09/14 01:41
5	BRS	L29	75	(359/\$ or 351/\$).ccls. and 22	IBM TDB	01:39
6	BRS	L36	75	29 not 1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/09/14 01:39
7	BRS	L43	14	((fresnel or prismatic) near20 equivalent) near10 (curved or flat)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/09/14 01:45
8	BRS	L50	0	((fresnel) near20 equivalent) near20 (curved and flat)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/09/14 01:46
9	BRS	L57	9	((fresnel) same equivalent) same (curved and flat)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/09/14 01:46

L Number	Hits	Search Text	DB	Time stamp
1	160	bend\$6 near10 ((fresnel or prism\$6) near3 lens)	USPAT;	2002/09/14 01:23
			US-PGPUB;	
			ЕРО; ЈРО;	
			DERWENT;	
			IBM TDB	
8	51	359/\$.ccls. and (bend\$6 near10 ((fresnel or prism\$6) near3 lens))	USPAT;	2002/09/14 01:38
			US-PGPUB;	
			ЕРО; ЛРО;	
			DERWENT,	
			IBM_TDB	
15	109	(bend\$6 near10 ((fresnel or prism\$6) near3 lens)) not (359/\$.ccls. and	USPAT;	2002/09/14 01:37
		(bend\$6 near10 ((fresnel or prism\$6) near3 lens)))	US-PGPUB;	
			ЕРО; ЛРО;	
			DERWENT;	
			IBM_TDB	
22	207	fresnel near10 equivalent	USPĀT;	2002/09/14 01:41
			US-PGPUB;	
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
29	75	(359/\$ or 351/\$).ccls. and (fresnel near10 equivalent)	USPAT;	2002/09/14 01:39
			US-PGPUB;	
			ЕРО; ЛРО;	
			DERWENT;	
			IBM TDB	
36	75	((359/\$ or 351/\$).ccls. and (fresnel near10 equivalent)) not (bend\$6	USPAT;	2002/09/14 01:39
		near10 ((fresnel or prism\$6) near3 lens))	US-PGPUB;	
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
43	14	((fresnel or prismatic) near20 equivalent) near10 (curved or flat)	USPAT;	2002/09/14 01:45
			US-PGPUB;	
			ЕРО; ЛРО;	
			DERWENT;	
			IBM_TDB	
50	0	((fresnel) near20 equivalent) near20 (curved and flat)	USPAT;	2002/09/14 01:46
			US-PGPUB;	
			ЕРО; ЈРО;	
			DERWENT;	
			IBM_TDB	
57	9	((fresnel) same equivalent) same (curved and flat)	USPĀT;	2002/09/14 01:46
			US-PGPUB;	
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	

DOCUMENT-IDENTIFIER: US 6074196 A

TITLE: Fresnel lens manufacturing apparatus

----- KWIC -----

A Fresnel lens is characterized in that its thickness is small. A virtual concave or convex lens, having curved faces, is split with reference to a great number of minute sections. The curved faces as split into the plural sections are arranged on a plane surface to define the Fresnel lens, which is optically equivalent to the original concave or convex lens virtually plotted. The Fresnel lens is also understood as a combination of a plurality of minute lens elements which are different in direction of refraction. The Fresnel lens has an advantage in that its thickness and weight is smaller than an equivalent concave or convex lens, and in that it can be manufactured easily in mass production by injection molding. The Fresnel lens is generally used as a plate for condensing light projected from a light source. One of the two faces of the Fresnel lens can be provided with a deposit of reflective material, to obtain a Fresnel mirror, which is generally used in an overhead projector as a reflector placed on a stage for supporting a transparent original.

DOCUMENT-IDENTIFIER: US 5840352 A

TITLE: Fresnel lens manufacturing apparatus

----- KWIC -----

A Fresnel lens is characterized in that its thickness is small. A virtual concave or convex lens, having curved faces, is split with reference to a great number of minute sections. The curved faces as split into the plural sections are arranged on a plane surface to define the Fresnel lens, which is optically equivalent to the original concave or convex lens virtually plotted. The Fresnel lens is also understood as a combination of a plurality of minute lens elements which are different in direction of refraction. The Fresnel lens has an advantage in that its thickness and weight is smaller than an equivalent concave or convex lens, and in that it can be manufactured easily in mass production by injection molding. The Fresnel lens is generally used as a plate for condensing light projected from a light source. One of the two faces of the Fresnel lens can be provided with a deposit of reflective material, to obtain a Fresnel mirror, which is generally used in an overhead projector as a reflector placed on a stage for supporting a transparent original.

DOCUMENT-IDENTIFIER: US 5178636 A

TITLE: Tuned Fresnel lens for multifocal intraocular applications including small incision surgeries

 KWIC	
 NWIC.	

Referring to FIGS. 1A-1C, as explained above, a conventional plano convex lens 10 can be sliced into thin cylindrical sections, as shown. A Fresnel lens 100 which is effectively a flat array of thin annular lenses may then be formed, as shown in FIGS. 1B and 1C this lens 100 is therefore substantially the optical equivalent of the lens 10 shown in FIG. 1A.

US-PAT-NO: 4318890 DOCUMENT-IDENTIFIER: US 4318890 A

TITLE: Reactor for generating granular metal hydride

----- KWIC -----

Second, the lens must be sufficiently thin to minimize energy transmission loss by absorption and diffusion within the lens material, with the resulting heat build-up that occurs thereby. Although a regular double convex quartz lens can be employed, a quartz lens of Fresnel type design will have a minimum lens thickness because of its flat plate cross section and still will achieve equivalent refraction and focusing parameters.

DOCUMENT-IDENTIFIER: US 4233127 A

TITLE: Process and apparatus for generating hydrogen and oxygen using solar energy

----- KWIC -----

Second, the lens must be sufficiently thin to minimize energy transmission loss by absorption and diffusion within the lens material, with the resulting heat build-up that occurs thereby. Although a regular double convex quartz lens can be employed, a quartz lens of Fresnel type design will have a minimum lens thickness because of its flat plate cross section and still will achieve equivalent refraction and focusing parameters.

US-PAT-NO: 3861785
DOCUMENT-IDENTIFIER: US 3861785 A
TITLE: WIDE ANGLE MIRROR ASSEMBLY
KWIC

More particularly, it is an object of this invention to provide a mirror assembly which incorporates a Fresnel lens combined with a plane mirror to define in a flat structure the equivalent of a convex mirror, but without bulging or convexity and without optical distortion or glare.

Current US Cross Reference Classification - CCXR (2):

359/618

Current US Cross Reference Classification - CCXR (3):

359/619

DOCUMENT-IDENTIFIER: US 5929445 A

TITLE: Passive infrared detector

----- KWIC -----

It is understood that one skilled in the art can form and/or bend a Fresnel lens to focus received radiation to a predetermined angle, and also that an array or set of Fresnel lens segments or sections may be formed as a sheet or strip in a manner known in the art. As shown in the illustrative embodiment of FIG. 3, the Fresnel lens array 26 is configured to be generally concave with the curved portion oriented away from the entrance window of the exposed surface. In other embodiments, the Fresnel lens array 26 may have a generally convex configuration. It should be understood that the sectors of the Fresnel lens array may be individually substantially planar but angularly positioned with respect to each other to provide a generally concave or a generally convex configuration.

DOCUMENT-IDENTIFIER: US 5717203 A

TITLE: Infrared motion detector with 180 .degree. detecting range

----- KWIC -----

As shown in FIG. 3, the focusing lens 20 is semi-cylindrical with its central axis indicated by numeral 21 for the purpose of reference. Such a lens has been known and may be made by bending a Fresnel lens made of a polyethylene sheet into a semi-cylindrical form. According to a preferred embodiment of the invention, as illustrated in FIG. 3, the sheet to be bent to form the focusing lens 20 is partitioned into three strip-like lens portions 20-1, 20-2 and 20-3 one on top of another which are bent together. The lens portions 20-1, 20-2 and 20-3 may be of the same or different widths (in the direction of the axis 21), each being adapted to receive and focus infrared signals from sources at distances within a difference range. This is schematically illustrated in FIG. 4 wherein the detector assembly 10 is set at a certain height and a somewhat downward orientation. One of the lens portions is adapted to detect infrared sources at horizontal radial distances in a first range between D.sub.1 and D.sub.2 from the detector assembly 10, another being for sources at distances in a second range between D.sub.2 and D.sub.3, and the third being for sources at distances in excess of D.sub.3, where the distances D.sub.1, D.sub.2 and D.sub.3 may be set, for example, equal to 3 m, 8 m, and 15 m, respectively.

DOCUMENT-IDENTIFIER: US 4990783 A

TITLE: Range insensitive infrared intrusion detector

----- KWIC -----

In EP-Al-No. 0'262'241 (corresponding to U.S. Pat. No. 4,740,701), it was suggested to provide an infrared detector having a field of detection in the form of sharply defined strips or elongate zones of substantially uniform sensitivity to infrared radiation without a gap by bending a thin cylindrical Fresnel lens in the longitudinal direction in such a way that the radius of curvature corresponds to its focal length. The infrared sensor is arranged approximately in the focal point of thus created cylindrical Fresnel lens. An advantage of this arrangement is that a protective curtain without a gap is obtained, but the disadvantage is that the sensitivity of the detector decreases with increasing distance from the detector. (The sensitivity of the detector is approximately inversely proportional to the distance from the infrared intrusion detector; see FIG. 7.)

DOCUMENT-IDENTIFIER: US 4124282 A

TITLE: Ophthalmic lenses

----- KWIC -----

According to a preferred feature of the invention, however, such a lens may be produced by providing a lens blank with an optically finished surface, and then bending the lens blank to introduce the required prismatic effect into said lens surface, the bending of the lens being so controlled as to produce in said optically finished surface the required transverse band.

The bending of the lens blank coupled with the grinding of the said opposite surface introduces a prismatic effect into the finished lens and has the result, when the initial optically finished surface is curved, of relocating the centers of curvature of the portions of the lens defined by the axis of bending. If desired, the said opposite surface of the initial lens blank by itself incorporate such a prismatic effect in order to reduce the grinding required to finish the said opposite surface of the lens, in which case the former may be flat or of shallower angle than otherwise required. There are also special cases where it is preferable that the aberration is not exactly mid-way between the optical centers.

DOCUMENT-IDENTIFIER: US 3903531 A

TITLE: Color micro optic apparatus

----- KWIC -----

Referring now to FIG. 7 of the drawings, still another method of using the apparatus as a camera is illustrated here using a Fresnel lens. The numeral 44 denotes a conventional Fresnel lens as is illustrated in combination with a light scattering screen 46 which passes and scatters the light from photographic objective 40 through the microfiche 12 as illustrated. The use of the Fresnel lens solves the problem of large angle rays, thereby decreasing the requirement for the use of septa 34. In the arrangement illustrated at FIG. 7, the Fresnel lens has essentially the same focal length as that of lens 40 and functions to bend the principal rays from different parts of an object into parallel rays, these latter rays passing through the microfiche 10 via the several sets of color filters 24, 26, 28. If desired, however, septa 34 may be employed in the embodiment of FIG. 7.

DOCUMENT-IDENTIFIER: US 3824609 A

TITLE: COLOR MICRO OPTIC APPARATUS

----- KWIC -----

Referring now to FIG. 7 of the drawings, still another method of using the apparatus as a camera is illustrated, here using a Fresnel lens. The numeral 44 denotes a conventional Fresnel lens as is illustrated in combination with a light scattering screen 46 which passes and scatters the light from photographic objective 40 through the microfiche 12 as illustrated. The use of the Fresnel lens solves the problem of large angle rays, thereby decreasing the requirement for the use of septa 34. In the arrangement illustrated at FIG. 7, the Fresnel lens has essentially the same focal length as that of lens 40 and functions to bend the principal rays from different parts of an object into parallel rays, these latter rays passing through the microfiche 10 via the several sets of color filters 24, 26, 28. If desired, however, septa 34 may be employed in the embodiment of FIG. 7.

	√	Document ID	Current OR	Kind Codes	Source	Issue Date	Pages
1	⊠	US 5929445 A	250/353		USPAT	19990727	NA
2		US 5717203 A	250/221		USPAT	19980210	NA
3		US 4990783 A	250/353		USPAT	19910205	NA
4		US 4124282 A	351/168		USPAT	19781107	NA

	1	Document ID	Current OR	Kind Codes	Source	Issue Date	Pages
5	×	US 3903531 A	396/307		USPAT	19750902	NA
6	⊠	US 3824609 A	396/307		USPAT	19740716	NA

DOCUMENT-IDENTIFIER: US 5929445 A

TITLE: Passive infrared detector

DATE-ISSUED: July 27, 1999

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Barone; Stephen Dix Hills NY N/A N/A

ASSIGNEE INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Electro-Optic Dix Hills NY N/A N/A 02

Technologies, LLC

APPL-NO: 08/712617

DATE FILED: September 13, 1996

INT-CL: [06] G01J005/08,G08B013/193

US-CL-ISSUED: 250/353;250/DIG.1

US-CL-CURRENT: 250/353; 250/DIG.1

FIELD-OF-SEARCH: 250/342; 250/349; 250/353; 250/DIG.1

REF-CITED:

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3524180	August 1970	Cruse		N/A	N/A	N/A
3631434	December 1971	Schwart	tz	N/A	N/A	N/A
3703718	November 1972	Berman	l	N/A	N/A	N/A
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4978843	December 1990	Yamaka	awa	N/A	1	N/A

DOCUMENT-IDENTIFIER: US 5717203 A

TITLE: Infrared motion detector with 180 .degree. detecting range

DATE-ISSUED: February 10, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Yung; Simon K. C. Jardine's Lookout N/A N/A HK

APPL-NO: 08/800302

DATE FILED: February 18, 1997

PARENT-CASE:

This is a continuation of application Ser. No. 08/346,049, filed Nov. 29, 1994, now abandoned.

INT-CL: [06] G08B013/18,G01J005/08

· US-CL-ISSUED: 250/221;250/222.1 ;250/353 ;340/567

US-CL-CURRENT: 250/221; 250/222.1; 250/353; 340/567

FIELD-OF-SEARCH: 250/221; 250/222.1; 250/239; 250/342; 250/353; 250/203.1

; 340/555 ; 340/556 ; 340/557 ; 340/565 ; 340/567

REF-CITED:

U.S. PATENT DOCUMENTS

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PAT-N	O ISSUE-D	ATE PAT	TENTEE-NAME	US-CL
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PCT International Search Report dated Apr. 22, 1996, for International Application No. PCT/IB95/01127.

DOCUMENT-IDENTIFIER: US 4990783 A

TITLE: Range insensitive infrared intrusion detector

DATE-ISSUED: February 5, 1991

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Muller; Kurt A. Stafa N/A N/A CH

Mahler; Hansjurg Hombrechtikon N/A N/A CH

ASSIGNEE INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Cerberus A.G. N/A N/A N/A CH 03

APPL-NO: 07/409142

DATE FILED: September 19, 1989

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY APPL-NO APPL-DATE

CH 3508/88 September 22, 1988

INT-CL: [05] G01J005/08,G08B013/18

US-CL-ISSUED: 250/353;250/342

US-CL-CURRENT: 250/353; 250/342; 250/DIG.1

FIELD-OF-SEARCH: 250/353; 250/338.1; 250/221; 250/342; 340/567; 340/600

REF-CITED:

U.S. PATENT DOCUMENTS

PAT-NO ISSUE-DATE PATENTEE-NAME **US-CL** 4339748 July 1982 N/A N/A Guscott et al. 340/555 4625115 November 1986 Guscott 250/353 N/A N/A 4709152 November 1987 Muller et al. 250/342 N/A N/A 4734585 March 1988 Owers 250/353 N/A N/A 4752769 June 1988 Knaup et al. 340/567 N/A N/A 4769545 September 1988 Fraden 250/353 N/A N/A 4841284 June 1989 Biersdorff 340/567 N/A N/A 4880980 November 1989 Muller et al. 250/353 N/A N/A 4893014 January 1990 Geck 250/353 N/A N/A Walters et al. 4920268 April 1990 250/353 N/A N/A

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO PUBN-DATE COUNTRY US-CL

DOCUMENT-IDENTIFIER: US 4124282 A

TITLE: Ophthalmic lenses

DATE-ISSUED: November 7, 1978

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Bush; Sydney J. Kirkella, Hull N/A N/A GB2

APPL-NO: 05/694924

DATE FILED: June 11, 1976

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY APPL-NO APPL-DATE
GB 25448/75 June 13, 1975
GB 5476/76 February 11, 1976
GB 7309/76 February 24, 1976

INT-CL: [02] G02C007/06

US-CL-ISSUED: 351/168

US-CL-CURRENT: 351/168

FIELD-OF-SEARCH: 351/168; 351/170

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO PUBN-DATE COUNTRY US-CL

204,803 August 1959 AT 351/168

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Henry A. Knoll, "The Optical Characteristics . . .," Amer. J. Optom. & Archives . . ., vol. 39, No. 10, Oct. 1962, pp. 538-542.

ART-UNIT: 257

PRIMARY-EXAMINER: Sacher; Paul A.

ABSTRACT:

DOCUMENT-IDENTIFIER: US 3824609 A

TITLE: COLOR MICRO OPTIC APPARATUS

DATE-ISSUED: July 16, 1974

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Tevick; George J. Leonia NJ N/A N/A

ASSIGNEE INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Personal Stamford CT N/A N/A 02

Communications, Inc.

APPL-NO: 05/332284

DATE FILED: February 14, 1973

INT-CL: [] G03b033/14

US-CL-ISSUED: 354/102;95/12.2 ;95/37 ;352/66 ;352/67

US-CL-CURRENT: 396/307; 352/66; 352/67

FIELD-OF-SEARCH: 95/12.2; 95/37; 352/66; 352/67; 355/32; 355/33; 355/88

REF-CITED:

U.S. PATENT DOCUMENTS

US-CL PATENTEE-NAME PAT-NO ISSUE-DATE 1872501 August 1932 Rehlander 95/12.21 N/A N/A 2382604 August 1945 355/33 N/A N/A Capstaff et al. Bestenreiner et al. 95/12.21 N/A N/A 3641895 February 1972 N/A 95/37 N/A 3712724 January 1973 Courtney-Pratt

ART-UNIT: 211

PRIMARY-EXAMINER: Moses; Richard L.

ABSTRACT:

A color micro optic apparatus which employs black and white photographic film in taking and yet produces color images upon readout. Distributed sets of contiguous color filters, each set having (for example) red, green, and blue filters, are sequentially aligned with corresponding sets of lensettes of microfiche. In use as a camera, red light activates only those emulsion portions of the microfiche which are beneath the red filters, similar

Time Stamp	DB²	Search Text	etiH	#7	adyT	
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	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM		7	F8	ВКЗ	7
	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM		<i>†L</i> 9	ГIS	ВКЗ	ε
\$1:81 18/71/1007	ЉВВАТ; US-PGPUB; EPO; лРО; DERWENT; IBM	(ophthalm\$8 or spectacle\$2) and 15	97	L22	ВКЗ	7

US 0953554709P1



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